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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/699,022	10/31/2003	Guenter Weinberger	29083/44157	2140
7590 07/14/2006				
Barnes & Thornburg LLP Suite 900 750 17th Street, NW Washington, DC 20006-4675			EXAMINER WANG, ALBERT C	
			ART UNIT 2115	PAPER NUMBER

DATE MAILED: 07/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/699,022	Applicant(s) WEINBERGER ET AL.	
	Examiner Albert Wang	Art Unit 2115	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office action is responsive to the request for reconsideration filed 19 April 2006. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Naito et al., U.S. Patent No. 6,735,455 ("Naito"), in view of Gschwind et al., U.S. Patent No. 6,948,082 ("Gschwind").

As per claim 1, Naito teaches a method for conserving power by controlling program execution in a convergence device comprising a power source and at least one processor configured to perform processing operations associated with voice call communication functions and to perform processing operations associated with data communication functions (fig. 3), the processor being operative to execute critical programs and noncritical programs, the method comprising the steps of:

based at least in part on a power indicator representative of a characteristic of the power source, restricting execution of a given program associated with the data communication functions, such that an amount of power source capacity utilizable for the voice call communication functions is increased (col. 2, lines 54-65; col. 4, lines 42-59, priority given to radio communication function; col. 6, lines 48-53, programs associated with function processing

units; col. 7, lines 1-25, restrict function processing unit to reduce power consumption; col. 7, lines 45-63).

While Naito teaches the possibility of alternative procedures for restricting execution of a function (col. 4, lines 60-67), Naito does not expressly teach replacing execution of the given program with execution of the alternate capacity program performing substantially the same function as the given program but having a different power source capacity associated therewith. Naito teaches one procedure for restricting execution is by changing frequency (col. 7, lines 1-25). As an alternative embodiment to changing frequency, Gschwind teaches replacing an algorithm with one that consumes less power (col. 5, lines 33-45; col. 5, line 66 – col. 6, line 5; col. 8, lines 45-57). Although Gschwind teaches using alternative embodiments to reduce power consumption for the purpose of thermal management, it would have been obvious to one of ordinary skill in the art, at the time of the invention, that reducing power dissipation is applicable for the purpose of conserving a finite power source. According to fundamental heat transfer, power dissipation often leads to temperature rise; whereas according to fundamental energy balance (first law of thermodynamics), any power not dissipated is power conserved. Thus it would have been obvious that Naito's restricting may be achieved by Gschwind's replacing a program with an alternate program that consumes less power. Since Naito teaches restricting execution when power source capacity is below a threshold, the alternate program would be associated with a different power source capacity. Furthermore, calling an alternate program inherently involves use of an identifier associated with that alternate function.

As per claim 2, Naito teaches the power source comprises a battery (col. 6, lines 54-60).

As per claim 3, Naito teaches the power indicator is representative of a remaining capacity of the battery (col. 7, lines 1-25).

As per claim 4, Naito teaches if the power indicator is below a first threshold, restricting execution of the given program (col. 7, lines 1-25).

As per claim 5, Gschwind teaches execution of a given program is replaced with execution of an alternate capacity program having higher power consumption when a threshold is exceeded (col. 8, lines 15-36). This changing to a higher power consumption mode may be adapted for execution based on power source capacity.

As per claim 6, Naito teaches the voice call communication functions comprise one or more functions associated with cellular voice call communications (col. 7, lines 45-63).

As per claims 7-10, Gschwind teaches multimedia processing at one or more of a specified data rate, a specified refresh rate and a specified display resolution (col. 5, lines 33-66).

As per claim 11, Naito teaches the critical programs comprise programs utilized to implement at least one of an operating system running on the processor, a graphical user interface of the convergence device, and one or more of the voice call communication functions (col. 7, lines 45-63).

As per claim 12, Naito teaches a threshold for a power source capacity and therefore teaches at least two categories including a category at a first capacity and a category at a second capacity, the first capacity being a lower capacity than the second capacity (col. 7, lines 1-25).

As per claim 13, Gschwind teaches each of at least a subset of the plurality of noncritical programs may be in one of a number of states, including at least an executing state, a pending state and a sleeping state (col. 5, lines 33-66).

As per claim 14, Naito teaches if the power indicator is below a second threshold that is lower than the first threshold, the given noncritical program and the alternate noncritical program are set to a sleeping status (col. 7, lines 26-34).

As per claim 15, waking up based on power source capacity is well known in the art.

As per claim 16, Naito teaches the second threshold is representative of a minimum acceptable capacity for continuation of one or more of the voice call communication functions (col. 7, lines 45-63).

As per claim 17, Gschwind teaches the processor is operative to store a list of the noncritical programs with associated capacities for one or more of the noncritical programs (col. 48-65).

As per claim 18, Gschwind teaches multithreaded processing (col. 9, lines 31-46).

As per claim 19, Naito teaches a convergence device comprising:

a power source (fig. 3, power supply 1); and

at least one processor configured to perform processing operations associated with voice call communication functions and to perform processing operations associated with data communication functions, the processor being operative to execute critical and noncritical functions (fig. 3, processing control unit 10; col. 2, lines 54-65; col. 7, line 64 – col. 8, line 6);

wherein based at least in part on a power indicator representative of a characteristic of the power source, restricting execution of a given program associated with the data communication functions, such that an amount of power source capacity utilizable for the voice call communication functions is increased (col. 2, lines 54-65; col. 4, lines 42-59, priority given to

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radio communication function; col. 6, lines 48-53, programs associated with function processing units; col. 7, lines 1-25, restrict function processing unit to reduce power consumption; col. 7, lines 45-63).

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As per claim 20, since Naito/Gschwind teaches the method of claim 1 and the convergence device of claim 19, Naito/Gschwind teaches the claimed article of manufacture.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Albert Wang whose telephone number is 571-272-3669. The examiner can normally be reached on M-F (9:30 - 6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas C. Lee can be reached on 571-272-3667. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AW


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